

Мельник Антон Олегович,
PhD, доцент кафедри менеджменту, бізнесу і
адміністрування. Харківський національний
економічний університет імені Семена Кузнеця

Melnyk Anton, PhD, Associate Professor of the
Department of Management, Business, and
Administration, Simon Kuznets Kharkiv National
University of Economics,
<https://orcid.org/0000-0002-8863-3587>

IMPLEMENTATION OF DIGITAL SOLUTIONS FOR OPTIMIZING ORGANIZATIONAL MANAGEMENT PROCESSES ВПРОВАДЖЕННЯ ЦИФРОВИХ РІШЕНЬ ДЛЯ ОПТИМІЗАЦІЇ УПРАВЛІНСЬКИХ ПРОЦЕСІВ ОРГАНІЗАЦІЇ

Мельник А. О. Впровадження цифрових рішень
для оптимізації управлінських процесів орга-
нізації. *Український журнал прикладної економіки
та техніки*. 2024. Том 9. № 4. С. 171 – 176.

Melnyk A. Implementation of digital solutions for
optimizing organizational management processes.
*Ukrainian journal of applied economics and
technology*. 2024. Volume 9. № 4, pp. 171 – 176.

The article studies the aspects of implementing digital solutions to optimize management processes. The research aims to analyze, systematize, and generalize the existing theoretical and methodological support for organizational management and to develop a toolkit for implementing digital solutions in management processes. The study analyzes key management processes (planning, organization, motivation, control, and coordination) based on management functions. It justifies the need for implementing digital tools to optimize management processes in the face of modern challenges. A review of literature sources has identified digital technologies that significantly improve organizational effectiveness, increase adaptability, and enhance competitiveness. It was found that digital solutions such as management task automation, Big Data analytics, electronic document flow, and digital communication platforms have great potential for optimizing all management aspects. Digital planning tools allow for more efficient resource forecasting, risk assessment, and adjustment of development strategies. In the organizational process, digitalization helps automate business processes, reducing task completion time and minimizing the likelihood of errors. In the motivational process, using digital platforms enables efficient tracking of employee performance, the creation of personalized reward and incentive programs, and the implementation of gamification to increase employee engagement. Digital solutions in control ensure accurate task monitoring and prompt adjustment of deviations, contributing to compliance with established norms and standards. Coordination in management processes is also significantly improved by implementing digital platforms for project management and internal communication. These tools ensure synchronized work between departments, optimizing task performance and reducing the risk of delays. It is justified that implementing digital technologies reduces time and resource costs, improves transparency in business processes, and adapts organizations to a rapidly changing environment. It has been revealed that digital solutions automate routine tasks and create conditions for innovative development and business sustainability. Thus, implementing digital solutions in all management processes of an organization enhances its effectiveness, adaptability, and ability to respond to external changes, which is critically important in the modern globalized world.

Keywords: management process, management, digital solutions, digitalization, digital tools, automation, adaptation.

Статтю присвячено дослідженню аспектів впровадження цифрових рішень для оптимізації управлінських процесів. Метою дослідження є аналіз, систематизація та узагальнення наявного теоретико-методичного забезпечення управління організацією та розробка інструментарію впровадження цифрових рішень в управлінські процеси. У дослідженні представлено аналіз ключових управлінських процесів (планування, організацію, мотивацію, контроль та координацію), що базуються на функціях менеджменту, та обґрунтовано необхідність впровадження цифрових інструментів для оптимізації управлінських процесів в умовах сучасних викликів. Аналіз джерел літератури дозволив виокремити цифрові технології, що дозволяють значно покращити ефективність організації, підвищити її адаптивність та конкурентоспроможність. Виявлено, що цифрові рішення, такі як автоматизація управлінських завдань, аналітика на основі Big Data, електронний документообіг та цифрові платформи для комунікації, мають значний потенціал для оптимізації усіх аспектів управління. Зокрема, цифрові інструменти для планування дозволяють більш ефективно прогнозувати потреби в ресурсах, оцінювати ризики та коригувати стратегії розвитку. В організаційному процесі цифровізація допомагає автоматизувати бізнес-процеси, що скорочує час виконання завдань та знижує ймовірність помилок. У мотиваційному процесі використання цифрових платформ дозволяє ефективно відстежувати продуктивність співробітників, створювати персоналізовані програми винагороди та заохочення, а також впроваджувати гейміфікацію для підвищення залученості персоналу. Цифрові рішення в контролі забезпечують точний моніторинг виконання завдань та оперативне коригування відхилень, що сприяє дотриманню встановлених норм та стандартів. Координація в управлінських процесах також значно покращується завдяки впровадженню цифрових платформ для управління проектами та внутрішньою комунікацією. Ці інструменти дозволяють забезпечити синхронізовану роботу між підрозділами, що оптимізує виконання завдань і знижує ризики затримок. Обґрунтовано, що впровадження цифрових технологій дають змогу зменшити витрати часу та ресурсів, підвищити прозорість бізнес-процесів та адаптувати організацію до швидко змінюваного середовища. Виявлено, що цифрові рішення не тільки автоматизують рутинні завдання, а й створюють умови для інноваційного розвитку та забезпечення стійкості бізнесу. Таким чином, впровадження цифрових рішень у всі управлінські процеси

Statement of the problem

Organizations need to adapt management processes to modern challenges in the context of the rapid digitalization of the global economy. Growing volumes of information, increased competition, and the need for prompt decision-making require using digital solutions that provide automation, increased accuracy of data analysis, and reduced costs. Digital technologies allow for faster data processing, optimized internal processes, improved communication, and more efficient use of resources. However, implementing digital tools is accompanied by several problems, including the lack of a clear digital transformation strategy, low level of digital competence of personnel, high cost of integrating innovative solutions, and resistance to change on the part of employees. It has not been sufficiently studied how digital solutions affect the efficiency of management processes in various areas and what factors contribute to their successful integration into organizations. The study's relevance is determined by the fact that digitalization is not only a trend but also a necessary condition for ensuring the competitiveness of organizations in the modern business environment. Quarantine during the pandemic and the beginning of hostilities demonstrated the importance of flexible and technologically advanced management systems that allow for a prompt response to unforeseen crises. Thus, research into implementing digital solutions for optimizing management processes is important and timely, as it will contribute to developing modern digital management concepts and increasing organizational management efficiency.

The following domestic and foreign scientists made a significant contribution to the development of theoretical provisions and methodological principles of organizational management: Adom K. [6], Albert M. [1; 2], Bystrov M. [4], Hinson R. [6], Mescon M. [1; 2], Mintah E. [6], Obuobisa-Darko T. [6], Rusakova E. [4], Terletskyi I., Us Yu. [5], Khedouri F. [1; 2], Shingo S. [3], and others. In their works, scientists study management functions and their application in actual conditions of modern business.

In connection with the increasing pace of digitalization of the economy, the research Balamut G. [10], Bodnar A. [8], Buhrimenko R. [10], Voitenko V. [13], Galoyan D. [10], Gorobets O., Grinchak N. [7], Hrytsko R. [12], Hrosul V. [10], Kantsur I. [11], Lazebnyk L. [13], Melinevsky A. [11], Mkrtychyan T. [10], Pekanets S. [12], Porter M. [14], Romanyuk A. [8], Smirnova P. [10], Suprunenko S. [11], Happelmann J. [14], Tsyupak V. [8], Shatilova O. V. [9], Shyshuk N. [9], Shulzhik Yu. [12]. Moreover, others who are devoted to studying urgent issues of implementing digital technologies in organizational management have become particularly relevant. The authors investigate the impact of digitalization on management processes and organizational efficiency of enterprises, as well as ways to optimize business processes through modern digital technologies.

Despite the broad coverage of the given topic, some aspects are not fully disclosed and require analysis, systematization, and improvement. Thus, the scientific literature does not present a generally accepted toolkit for implementing digital solutions in organizations' management processes.

The purpose of the research

The study's purpose is to analyze, systematize, and generalize the existing theoretical and methodological support for organizational management and develop tools for implementing digital solutions in management processes.

Presentation of the main research material

Management is an integral part of the activities of any organization, regardless of its size or field of activity. It ensures coherence of actions, rational use of resources, and focus on achieving goals, allowing the organization to function effectively in constant change and growing competition. In the modern economic environment, characterized by rapid technological progress, changes in consumer preferences, legislative innovations, and economic crises, management allows organizations to adapt their strategies, quickly respond to changes in the external environment, and maintain competitiveness. Management also contributes to staff motivation, the development of corporate culture, the effective distribution of responsibilities, and conflict resolution. It provides control over the implementation of tasks, analysis of results, and timely adjustments, which supports the organization's stability. In addition, management stimulates innovative development, contributing to introducing new ideas and technologies, which is the basis for long-term success.

The above is closely intertwined with traditional management functions, which have received wide coverage in classical [1; 2] and modern [3–6] studies. Management functions act as the main management processes in the organization: planning, organizational process, motivational process, control, and coordination. It is considered necessary to consider each in detail to substantiate the ways and tools for implementing digital solutions to optimize the organization's management processes.

Planning is the first and extremely important management process. It consists of determining the organization's long-term and short-term goals and developing strategies and tactical steps to achieve them. The planning process includes analyzing the current situation, predicting future changes, and assessing possible risks. This allows you to orient the organization to the desired result and determine the resources and time necessary to achieve these goals. Planning provides guidelines for all further management actions and is the basis for forming specific tasks and development strategies.

The organizational process consists of creating an internal structure of the enterprise, which includes the distribution of responsibilities, resources, and tasks between departments and employees. It also includes establishing clear lines of communication and defining roles and authorities to ensure effective coordination of actions at all levels. The organizational process contributes to the rational use of resources, supports goals through an appropriate management structure, and allows you to achieve the desired results within the established deadlines and requirements. The motivational process ensures a high level of productivity; it creates conditions that stimulate personnel to perform the tasks set at a high level. Motivation also involves creating a reward system, developing a corporate culture, ensuring a favorable working environment, and supporting employees' personal development. An important component of motivation is establishing clear and understandable criteria for assessing the work performed and providing effective feedback.

Control consists of continuous monitoring of the implementation of tasks and assessment of the results of the organization's or its divisions' activities. This process makes it possible to determine how much the results obtained correspond to the planned ones and assess the efficiency of resource use. Control includes regularly monitoring the plan's implementation, identifying deviations, and applying corrective measures to ensure the implementation of plans within the established parameters. Control helps to maintain stability in the management process and ensures accuracy in achieving strategic goals.

Coordination ensures the integration of all management process components, as well as interaction between divisions and individual participants in organizational activities. This contributes to optimizing internal processes, preventing duplication of functions, and increasing the efficiency of actions at all levels of management. Coordination includes establishing communication between employees and divisions, which allows you to quickly solve problems and move harmoniously towards achieving common goals.

All of the listed management processes are cyclical and interdependent, which allows the organization to constantly adjust and adapt its actions in accordance with changes in the external environment and internal conditions. They form the basis of any organization's functioning, ensuring effective management and achieving set goals.

At the same time, implementing digital solutions in management processes contributes to the adaptation of organizations to new conditions. It ensures competitiveness in the context of globalization and rapid changes in the external environment. This allows organizations not only to optimize internal processes but also to provide high-quality services to their customers, increasing the level of satisfaction and supporting development in the long term.

Modern scientific research [7–14] outlines the main areas of implementation of digital solutions in organizational management processes, in particular, the automation of management tasks, the use of analytics and Big Data, digital communication and collaboration, electronic document management, knowledge management through digital platforms, cybersecurity and information protection, digital platforms for project management, etc.

Automation of management tasks is one of the main components of implementing digital solutions; it allows you to automate numerous operational processes that previously required significant human resources. Automation facilitates document flow, data processing, resource and financial planning, task performance monitoring, etc. Specialized software solutions for process automation reduce the impact of the human factor, reduce the number of errors, and speed up task performance, which directly contributes to increasing the organization's efficiency [7; 10].

Using analytics and Big Data allows organizations to collect and analyze large amounts of data in real-time. This allows managers to make more informed decisions based on factual data rather than assumptions [8]. This approach allows organizations to quickly adapt to changes and provide an accurate response to the challenges of the modern business environment.

Digital platforms for communication and collaboration are important for improving interaction within the organization. Implementing such platforms allows for the effective organization of online conferences, project management, and joint work with documents and other resources [9; 11]. This reduces the logistics costs and time required for physical meetings, which is especially relevant in a globalized world and remote working conditions.

The transition to electronic document management is an important step in digitalizing management processes. This process simplifies document management, including storage, search, processing, and approval. Using digital archives and systems for document management increases the transparency and efficiency of business processes, reduces the costs of paper processing and storage, and provides quick access to the necessary information [10, 12, 13].

Knowledge management through digital platforms allows organizations to store, transfer, and use accumulated experience, knowledge, and best practices. This contributes to the development of organizational culture and ensures the constant availability of important information for decision-making, which is especially important for achieving the organization's sustainable development.

Also, an important component of digital technologies is ensuring cybersecurity and information protection. As organizations become increasingly important and sensitive, it is important to implement effective systems for protection against cyber threats, such as unauthorized access, loss, or manipulation of information [14].

Digital platforms for project management are also an important part of implementing digital solutions. They allow managers to effectively coordinate tasks, assess progress, determine the necessary resources, and ensure timely project implementation, which minimizes the risks of budget or schedule violations.

Therefore, implementing digital solutions in management processes not only increases the organization's efficiency but also provides greater adaptability, transparency, security, and the opportunity for innovative development. It is advisable to explore their implementation in various management processes: planning, organization, motivation, control, and coordination, having identified the available digital tools (Fig. 1).

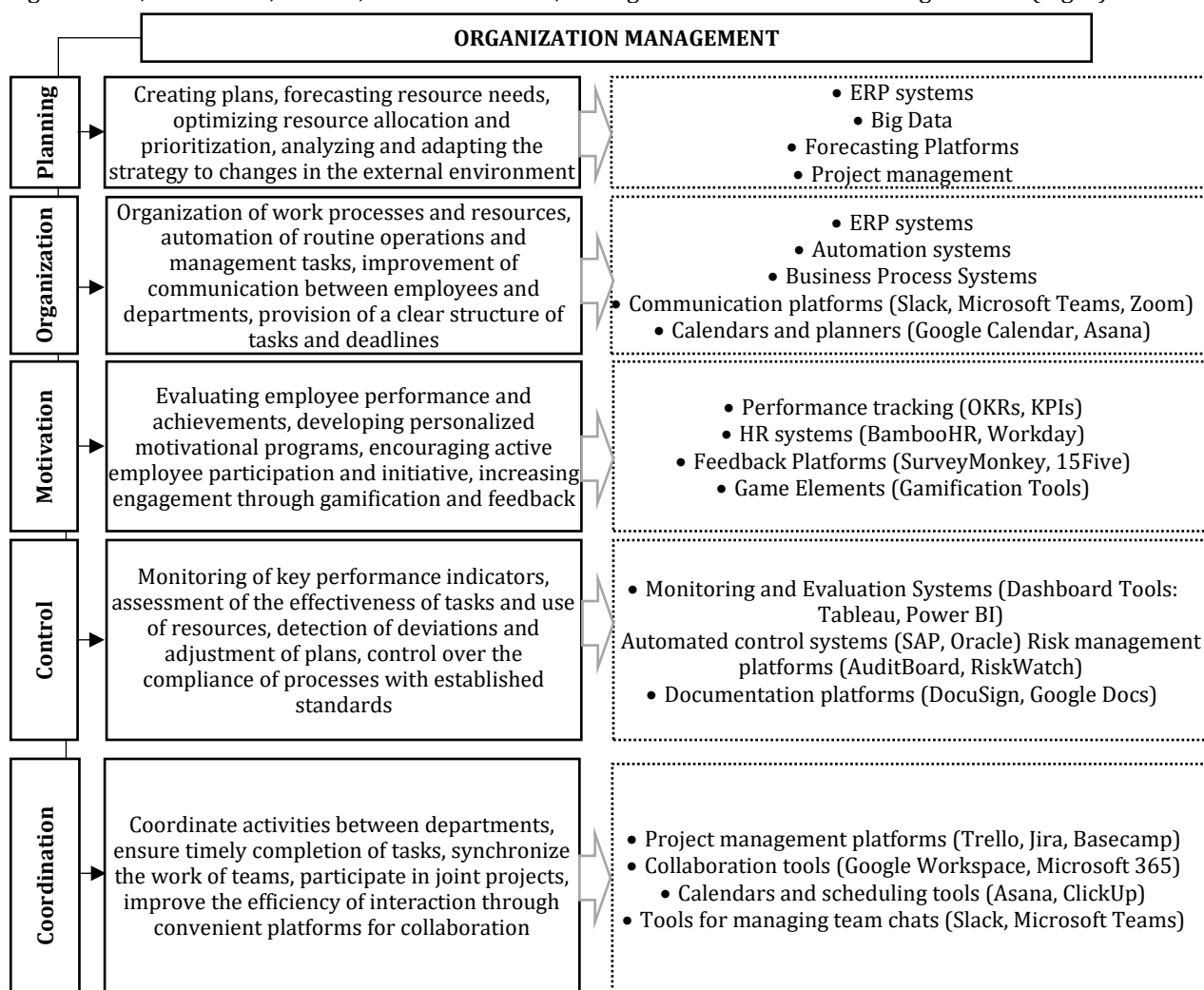


Fig. 1. Toolkit for implementing digital solutions in management processes

Source: author's development.

The introduction of digital solutions into each of the organization's management processes (planning, organizing, motivating, controlling, and coordinating) has significant potential to increase the efficiency and adaptability of business to modern challenges. Here is what it might look like for each specific management process:

Digital solutions significantly facilitate planning by providing organizations with access to tools for analyzing big data and analytics. This allows them to make more informed decisions based on actual data and trends rather than subjective assumptions. Planning tools, particularly ERP systems and Big Data platforms, automatically forecast resource needs and consider seasonal fluctuations in demand. They also allow for rapid adjustment of strategies per changes in the external environment, making the organization more flexible and adaptable to new conditions.

Digital tools for organizing business processes, such as ERP systems, business process automation (BPM) systems, and collaboration platforms, significantly simplify management processes. They allow you to structure tasks, delegate them between departments, track performance, and optimize resource use. This reduces the risk of human errors and speeds up processes, which is important for maintaining high productivity in a changing business environment. An important aspect is improving communication between employees and departments, which is provided through integrated platforms for collaboration and project management.

Digital solutions in motivational processes allow organizations to effectively monitor employee performance, analyze their achievements, and create personalized motivational programs. Performance tracking platforms, such as OKR or KPI systems, allow for analyzing employee results and determining the need for incentives or bonuses. Digital tools also contribute to the introduction of gamification into motivational processes, which can significantly increase employee engagement and their desire to achieve high results.

Digital tools for monitoring, controlling, and evaluating task performance and compliance with regulations allow for a high level of transparency and accountability in the organization. Using platforms such as

Tableau or Power BI for KPI analysis allows you to quickly identify deviations from the plan and adjust strategies to achieve the set goals. This is important for timely response to potential problems and ensuring that processes comply with internal standards and regulations. Audit and risk management systems also help track potential threats to the business, increasing control and stability.

Digital platforms for project management and communication ensure effective coordination of activities between different organization departments. They allow for real-time information exchange, collaborative work on documents, and integration of different functions in one workspace. Tools such as Trello, Jira, or Microsoft Teams improve task coordination, allow teams to synchronize their work, and reduce the risk of delays or inconsistencies in processes. This contributes to faster task completion and reduces time spent on management and organizational issues.

Thus, implementing digital solutions in all organizational management processes allows not only to automate routine tasks but also to significantly increase the efficiency, adaptability, and transparency of business processes. Digitalization helps to reduce time costs, errors, and overall productivity, which is especially important in today's rapidly changing business environment.

Conclusions and prospects for further research

Management is key to organizations' activities, ensuring their effective functioning and adaptation to a changing external environment. Management functions, such as planning, organizing, motivating, controlling, and coordinating, are the basis of management processes and allow for optimizing resources, maintaining stability, and achieving set goals. Introducing digital solutions into these processes significantly increases the organization's efficiency, adaptability, and transparency. Digital tools, such as task automation, data analytics, and digital communication and project management platforms, help reduce time spent, reduce errors, and improve overall productivity, which is critically important in today's dynamic business environment.

Література

1. Mescon M. H., Albert M., Khedouri F. *Management*. Harper & Row, New York. 1988. 777 p.
2. Mescon M. H., Albert M., Khedouri F. *Management: Individual and Organizational Effectiveness*. Harper & Row, New York. 1988. 756 p.
3. Shingo S. *Management Functions. Non-Stock Production*. 2024. pp. 209-230. DOI: <https://doi.org/10.4324/9781003578864-4>.
4. Rusakova E., Bystrov M. Control and Accounting as Functions of the Organization's Management System. *Proceedings of the 3rd International Conference Engineering Innovations and Sustainable Development*. 2024. pp.467-475. DOI: https://doi.org/10.1007/978-3-031-67372-6_59.
5. Us Yu & Terletsy I. Organizational and economic security of enterprise management based on strategic function parity. *Economic Bulletin of Dnipro University of Technology*. 2024. Vol. 87. pp. 141-149. DOI: <https://doi.org/10.33271/ebdut/87.141>.
6. Adom K., Hinson R., Mintah E., Obuobisa-Darko T. The Management Functions. *Business Administration*. 2023. pp.55-105. DOI: <https://doi.org/10.4324/9781003458524-4>.
7. Гринчак Н. А., Горобець О. О. Вплив цифровізації на процес прийняття управлінських рішень у міжнародному бізнесі. *Статистика України*. 2024, № 2. С. 108-115. DOI: [https://doi.org/10.31767/su.2\(105\)2024.02.10](https://doi.org/10.31767/su.2(105)2024.02.10).
8. Цюпак В., Боднар А., Романюк А. Впровадження цифрових технологій у управління підприємствами: можливості та виклики. *Економічний аналіз*. 2024. Том 34. № 2. С. 465-479. DOI: <https://doi.org/10.35774/econa2024.02.465>.
9. Шатілова О. В., Шишук Н. О. Цифрові інструменти інноваційного розвитку бізнес-організації. *Проблеми економіки*. 2020. № 4 (46). С. 249-255.
10. Galoyan D., Mkrtychyan T., Hrosul V., Buhrimenko R., Smirnova P., Balamut H. Formation of adaptation strategy for business entities in the context of digital transformation of the economy. *Review of Economics and Finance*. 2023, Issue 21. pp. 616-621. <https://doi.org/10.55365/1923.x2023.21.64>.
11. Канцур І., Меліневський А., & Супруненко С. Цифрова трансформація в управлінні бізнесом в умовах сучасних викликів. *Via Economica*, 2023. № 3, С. 42-47. <https://doi.org/10.32782/2786-8559/2023-3-6>.
12. Шульжик Ю., Грицко Р., Пеканець С. Управління змінами в умовах Цифровізації. *Публічне урядування*. 2022. № 2 (30). С. 127-134. DOI: [https://doi.org/10.32689/2617-2224-2022-2\(30\)-16](https://doi.org/10.32689/2617-2224-2022-2(30)-16).
13. Лазебник Л.Л., Войтенко В.О. Інформаційна інфраструктура в цифровізації бізнес-процесів підприємства. *Науковий вісник Міжнародного гуманітарного університету*. 2020. Вип. 42. С. 18-22. DOI: <https://doi.org/10.32841/2413-2675/2020-42-3>.
14. Porter M., Happelmann J. Revolution in competition. Smart technologies are changing the competition. *Harvard Business Review*. 2019. pp. 49-57.

References

1. Mescon, M. H., Albert, M., & Khedouri, F. (1988). *Management*. Harper & Row. 777 p.
2. Mescon, M. H., Albert, M., & Khedouri, F. (1988). *Management: Individual and organizational effectiveness*. Harper & Row. 756 p.
3. Shingo, S. (2024). *Management functions: Non-stock production*. pp. 209-230. <https://doi.org/10.4324/9781003578864-4>.
4. Rusakova, E., & Bystrov, M. (2024). Control and accounting as functions of the organization's management system. In *Proceedings of the 3rd International Conference Engineering Innovations and Sustainable Development* (pp. 467-475). https://doi.org/10.1007/978-3-031-67372-6_59.

-
5. Us, Yu., & Terlets'kyi, I. (2024). Organizational and economic security of enterprise management based on strategic function parity. *Economic Bulletin of Dnipro University of Technology*, 87, pp. 141-149. <https://doi.org/10.33271/ebdut/87.141>.
 6. Adom, K., Hinson, R., Mintah, E., & Obuobisa-Darko, T. (2023). The management functions. *Business Administration*, pp. 55-105. <https://doi.org/10.4324/9781003458524-4>.
 7. Hrynychak, N. A., & Horobets, O. O. (2024). Vplyv tsyfrovizatsii na protses pryiniattia upravlins'kykh rishen' u mizhnarodnomu biznesi [The impact of digitalization on the decision-making process in international business]. *Statystyka Ukrainy*, 2, pp. 108-115. [https://doi.org/10.31767/su.2\(105\)2024.02.10](https://doi.org/10.31767/su.2(105)2024.02.10).
 8. Tsypak, V., Bodnar, A., & Romaniuk, A. (2024). Vprovadzhennia tsyfrovoykh tekhnolohii u upravlinnia pidpriemstvamy: mozhlyvosti ta vyklyky [Implementation of digital technologies in enterprise management: Opportunities and challenges]. *Ekonomichnyy analiz*, 34(2), pp. 465-479. <https://doi.org/10.35774/econa2024.02.465>.
 9. Shatilova, O. V., & Shishuk, N. O. (2020). Tsyfrovii instrumenty innovatsiynoho rozvytku biznes-orhanizatsii [Digital tools for innovative development of business organizations]. *Problemy ekonomiky*, 4(46), pp. 249-255.
 10. Galoyan, D., Mkrtychyan, T., Hrosul, V., Buhrimenko, R., Smirnova, P., & Balamut, H. (2023). Formation of adaptation strategy for business entities in the context of digital transformation of the economy. *Review of Economics and Finance*, 21, pp. 616-621. <https://doi.org/10.55365/1923.x2023.21.64>.
 11. Kantsur, I., Mel'nevskyi, A., & Suprunenko, S. (2023). Tsyfrova transformatsiia v upravlinni byznesom v umovakh suchasnykh vyklykiv [Digital transformation in business management under modern challenges]. *Via Economica*, 3, pp. 42-47. <https://doi.org/10.32782/2786-8559/2023-3-6>.
 12. Shulzhyk, Yu., Grytsko, R., & Pekanets, S. (2022). Upravlinnia zminamy v umovakh tsyfrovizatsii [Change management in the context of digitalization]. *Publichne uryaduvannia*, 2(30), pp. 127-134. [https://doi.org/10.32689/2617-2224-2022-2\(30\)-16](https://doi.org/10.32689/2617-2224-2022-2(30)-16).
 13. Lazebnyk, L. L., & Voytenko, V. O. (2020). Informatsiyna infrastruktura v tsyfrovizatsii byznes-protseviv pidpriemstva [Information infrastructure in digitalization of business processes of an enterprise]. *Naukovyj visnyk Mizhnarodnoho humanitarnogo universytetu*, 42, pp. 18-22. <https://doi.org/10.32841/2413-2675/2020-42-3>.
 14. Porter, M., & Happelmann, J. (2019). Revolution in competition: Smart technologies are changing the competition. *Harvard Business Review*, pp. 49-57.

Стаття надійшла до редакції 23.10.2024 р.